

10/657,736

REMARKS

Applicants thank the Examiner for the attention accorded the instant application. In light of the present amendments, allowance is respectfully requested. Claim 1 has been canceled, and claims 2 and 5 have been amended.

In particular, the present claim 2 is directed to a system for acquiring information on the size of a voltage signal. The system includes N superconducting transmission lines arranged adjacently and substantially in parallel with each other providing a configuration of N substantially identical superconducting transmission lines. The configuration has two characteristic directions, a y direction, along the direction of the lines, and an x direction, directed across the lines. A matrix of embedded Josephson Junctions (JJs) are provided over the configuration of the N superconducting transmission lines, the matrix formed by  $2^{N-1}$  of the JJs on each one of the N superconducting transmission lines. The JJs are so placed as to yield N digit binary numbers in the x direction. An electron beam is provided impinging on the superconducting transmission lines. The electron beam is receptive to displacement along the direction of the superconducting transmission line in proportion to the size of the voltage signal. The electron beam generates a voltage step on the superconducting transmission line on condition of hitting any one of the one or more JJs. A scanning voltage deflecting the electron beam in the x direction is provided, wherein the electron beam periodically impinges on each one of the N superconducting transmission lines.

It is respectfully submitted that the system of claim 2 is not anticipated nor rendered obvious by the cited art.

Further, claim 5 has been amended to remove the statutory double patenting rejection. In the event a non-statutory double patenting rejection is set forth, applicants are prepared to submit a terminal disclaimer to overcome same.

No new matter has been added. Favorable action is earnestly solicited.

Respectfully Submitted,

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